§ 72.236 Specific requirements for spent fuel storage cask approval and fabrication.

The certificate holder and applicant for a CoC shall ensure that the requirements of this section are met.

(a) Specifications must be provided for the spent fuel to be stored in the spent fuel storage cask, such as, but not limited to, type of spent fuel (*i.e.*, BWR, PWR, both), maximum allowable enrichment of the fuel prior to any irradiation, burn-up (*i.e.*, megawatt-days/MTU), minimum acceptable cooling time of the spent fuel prior to storage in the spent fuel storage cask, maximum heat designed to be dissipated, maximum spent fuel loading limit, condition of the spent fuel (*i.e.*, intact assembly or consolidated fuel rods), the inerting atmosphere requirements.

(b) Design bases and design criteria must be provided for structures, systems, and components important to safety.

(c) The spent fuel storage cask must be designed and fabricated so that the spent fuel is maintained in a subcritical condition under credible conditions.

(d) Radiation shielding and confinement features must be provided sufficient to meet the requirements in §§ 72.104 and 72.106.

(e) The spent fuel storage cask must be designed to provide redundant sealing of confinement systems.

(f) The spent fuel storage cask must be designed to provide adequate heat removal capacity without active cooling systems.

(g) The spent fuel storage cask must be designed to store the spent fuel safely for a minimum of 20 years and permit maintenance as required.

(h) The spent fuel storage cask must be compatible with wet or dry spent fuel loading and unloading facilities.

(i) The spent fuel storage cask must be designed to facilitate decontamination to the extent practicable.

(j) The spent fuel storage cask must be inspected to ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce its confinement effectiveness.

(k) The spent fuel storage cask must be conspicuously and durably marked with—

(1) A model number;

(2) A unique identification number; and

(3) An empty weight.

(l) The spent fuel storage cask and its systems important to safety must be evaluated, by appropriate tests or by other means acceptable to the NRC, to demonstrate that they will reasonably maintain confinement of radioactive material under normal, off-normal, and credible accident conditions.

(m) To the extent practicable in the design of spent fuel storage casks, consideration should be given to compatibility with removal of the stored spent fuel from a reactor site, transportation, and ultimate disposition by the Department of Energy.

(n) Safeguards Information shall be protected against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

[64 FR 56126, Oct. 15, 1999, as amended at 65 FR 50617, Aug. 21, 2000; 73 FR 63573, Oct. 24, 2008]

§ 72.238 Issuance of an NRC Certificate of Compliance.

A Certificate of Compliance for a cask model will be issued by NRC on a finding that the requirements in § 72.236 (a) through (i) are met.

§ 72.240 Conditions for spent fuel storage cask reapproval.

(a) The certificate holder, a licensee using a spent fuel storage cask, or the representative of a licensee using a spent fuel storage cask shall apply for reapproval of the design of a spent fuel storage cask.

(b) The application for reapproval of the design of a spent fuel storage cask must be submitted not less than 30 days prior to the expiration date of the CoC. When the applicant has submitted a timely application for reapproval, the existing CoC will not expire until the application for reapproval has been determined by the NRC. The application must be accompanied by a safety analysis report (SAR). The new SAR

may reference the SAR originally submitted for the approved spent fuel storage cask design.

(c) The design of a spent fuel storage cask will be reapproved if the conditions in § 72.238 are met, and the application includes a demonstration that the storage of spent fuel has not significantly adversely affected structures, systems, and components important to safety.

[64 FR 56127, Oct. 15, 1999]

§ 72.242 Recordkeeping and reports.

(a) Each certificate holder or applicant shall maintain any records and produce any reports that may be required by the conditions of the CoC or by the rules, regulations, and orders of the NRC in effectuating the purposes of the Act.

(b) Records that are required by the regulations in this part or by conditions of the CoC must be maintained for the period specified by the appropriate regulation or the CoC conditions. If a retention period is not specified, the records must be maintained until the NRC terminates the CoC.

(c) Any record maintained under this part may be either the original or a reproduced copy by any state-of-the-art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by NRC regulations.

(d) Each certificate holder shall submit a written report to the NRC within 30 days of discovery of a design or fabrication deficiency, for any spent fuel storage cask which has been delivered to a licensee, when the design or fabrication deficiency affects the ability of structures, systems, and components important to safety to perform their intended safety function. The written report shall be sent to the NRC in accordance with the requirements of § 72.4. The report shall include the following:

(1) A brief abstract describing the deficiency, including all component or system failures that contributed to the deficiency and corrective action taken or planned to prevent recurrence;

(2) A clear, specific, narrative description of what occurred so that knowledgeable readers familiar with the design of the spent fuel storage cask, but not familiar with the details of a particular cask, can understand the deficiency. The narrative description shall include the following specific information as appropriate for the particular event:

(i) Dates and approximate times of discovery;

(ii) The cause of each component or system failure, if known;

(iii) The failure mode, mechanism, and effect of each failed component, if known;

(iv) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

(v) The method of discovery of each component or system failure;

(vi) The manufacturer and model number (or other identification) of each component that failed during the event;

(vii) The model and serial numbers of the affected spent fuel storage casks;

(viii) The licensees that have affected spent fuel storage casks;

(3) An assessment of the safety consequences and implications of the deficiency. This assessment shall include the availability of other systems or components that could have performed the same function as the components and systems that were affected;

(4) A description of any corrective actions planned as a result of the deficiency, including those to reduce the probability of similar occurrences in the future;

(5) Reference to any previous similar deficiencies at the same facility that are known to the certificate holder; and

(6) The name and telephone number of a person within the certificate holder's organization who is knowledgeable about the deficiency and can provide additional information.

[64 FR 56127, Oct. 15, 1999]

§ 72.244 Application for amendment of a certificate of compliance.

Whenever a certificate holder desires to amend the CoC (including a change to the terms, conditions or specifications of the CoC), an application for an amendment shall be filed with the